

# Oroville Facilities Relicensing Project

(FERC PROJECT NO. 2100)

California Department of Water Resources

## Oroville Facilities Draft Study Plan

### SP-T1 Effects of Project Features and Operation on Wildlife and Wildlife Habitat

#### Introduction

~~December 11, 2001~~ February 27, 2002

#### 1.0 Introduction/Background

Current and future Department of Water Resources management and operation of the Oroville facilities may impact wildlife and their habitats. Project operation and management can affect wildlife species and their habitats in a positive or negative manner. Identification and quantification of these impacts can provide project managers and stakeholders with the information necessary to make sound management decisions. This information can be used to:

- Identify management options or project modifications which minimize project-related ~~impacts~~ impacts;
- Identify opportunities for habitat ~~enhancement~~ enhancement; and,
- Identify species trade-offs associated with management and operation of the ~~facilities~~ facilities.

The scope of this issue includes all of the other wildlife issues identified during the scoping process. Analyses will rely extensively on information collected under other terrestrial resource studies.

#### 2.0 Study Objectives

The objectives of this study are to 1) identify any on-going and potential future project-related effects on wildlife and wildlife habitat; and 2) provide information that can be used to identify potential protection, mitigation, and enhancement measures. This study will evaluate ~~Forest Service management indicator species (band-tailed pigeon, black bear, waterfowl, and black-tailed deer);~~ selected groups of wildlife species, special status species, as well as, species biodiversity.

The objective of the study is to identify ~~current on-going and future project effects on wildlife and wildlife habitat, including band-tailed pigeon, black bear, waterfowl, black-tailed deer, special emphasis status species, CDFG harvest species, and species biodiversity and to identify potential protection, mitigation and enhancement measures.~~

#### Relationship to Relicensing/Need for Study

### **3.0 Relationship to Relicensing /Need for the Study**

Identification and quantification of project effects on wildlife and wildlife habitat has been recognized as an issue by relicensing stakeholders including stakeholders with mandatory conditioning authority and is a FERC requirement. Evaluation of project effects on wildlife resources is also required for CEQA/NEPA compliance.

Limited data currently exists related to project effects on wildlife resources and no previous evaluation of overall project effects on wildlife resources has been conducted. The information collected will be used to identify ~~opportunities to minimize or mitigate project~~ potential protection, mitigation and enhancement measures for- ~~project~~-related impacts to wildlife resources.

### **4.0 Study Area**

The study area is generally within or adjacent to the FERC project boundary, ~~but~~ and also includes the Feather River downstream to the confluence with the Sacramento River. The specific study area ~~includes encompasses~~ those described for ~~SP-T3 through SP-T11, Study #SP-T3/5 through Study #SP-T11.~~ For ESA-analysis of special status species, the specific study area is defined in ~~SP-T2, Study #SP-T2.~~

Study plans approved by the Environmental Work Group define the limits of the study area. If initial study results indicate that the study area should be expanded or contracted, the Environmental Work Group will discuss the basis for change and revise the study area as appropriate.

## **Methodology and Analysis**

### **5.0 General Approach**

The effects of project features and operation on wildlife and wildlife habitat is an overarching issue inclusive of all the other identified wildlife issues including current-on-going and future project effects on:

- State and federal special status species;
- Flood plains and water level fluctuation zones;
- Wildlife habitat, wildlife populations, and species biodiversity;
- Riparian, wetland, and upland habitats;
- Interagency wildlife management, coordination, and planning;
- Noxious weeds and undesirable non-native wildlife;
- Recreation related impact assessment;
- Land management impact assessment; and
- Cumulative effects analysis.

The information/results from the other wildlife-related studies will provide the basic information used for analyses of effects of project features and operation on wildlife and wildlife habitat. If initial study results

indicate that the methods and tasks should be modified, the Environmental Work Group will discuss the basis for change and revise the study plans as appropriate.

Task 1).—1—

Obtain wildlife habitat/plant community mapping ~~(SP-T4), (Study #SP-T4)~~, obtain wildlife biodiversity/habitat analyses ~~(SP-T4), (Study #SP-T4)~~, and obtain analyses of current-on-going and future project effects on state and federal special status species ~~(SP-T2), (Study #SP-T2)~~

Task 2—

~~Task 2).~~—Identify areas where project operations may occur and influence wildlife species.

Task 3).—3A—

Collect information related to on-going and future effects on wildlife and wildlife habitat related-associated with to project operations and maintenance of the project.

Task 3B

Complete analyses of current-on-going and future project effects on wildlife and wildlife habitat related to operations and maintenance conducted under ~~(SP-T3, SP-T5, SP-T8, and SP-T10), (Study #SP-T3/5, Study #T5, Study #SP-T8, and Study #SP-T10)~~. Complete analyses of current-on-going and future project-related effects on wildlife and wildlife habitat related to recreation use and recreation facilities ~~(SP-T9), (Study #SP-T9)~~. Assessment of these effects may include both direct and indirect habitat loss as well as estimates of impacts on the populations of selected wildlife species, including waterfowl.

Task 4—

~~Task 4).~~—Complete analyses of current-on-going and future project effects on wildlife and wildlife habitat related to land management within the project area ~~(SP-T6, SP-T7, and SP-T11), (Study #SP-T6, SP-T7, and SP-T11)~~. These impacts may include vegetation and fuels management, grazing, and gravel harvest, harvest.

Task 5—

~~Task 5).~~—Using the information collected and results obtained from Tasks 1 through 4, summarize the current-on-going and future project effects on wildlife and wildlife habitat. Identify area wide and site-specific impacts. These effects may include water level fluctuations, altered river hydrology, and maintenance activities.

Task 6—

~~Task 6).~~—Based on the impact analysis, identify a range of measures potential protection, mitigation and enhancement measures to improve, preserve, or replace habitat for wildlife and wildlife habitat. These measures will provide conceptual information on the benefits of each measure as well as, general location,

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approximate timing, and relative scale for implementation. These conceptual measures will be further developed after appropriate review and approval.

#### Task 7

Preparation of final report: A final report will be prepared summarizing project-related impacts on wildlife and wildlife habitat, and potential protection, enhancement and mitigation measures. Additional description on the contents of the report are provided below.

## **6.0 Results and Products/Deliverables**

### **Results**

Results of the study will be presented as a summary report to stakeholders. The purpose of the report is to provide information on wildlife and wildlife habitats potentially affected by the project as mandated by the Federal Power Act, California Environmental Quality Act, National Environmental Policy Act, Federal Endangered Species Act and State Endangered Species Act. The following outline will be used:

- 1.0 Introduction
- 2.0 Analysis of Project-related Effects on Wildlife Species
  - 2.1 State and Federal Special Status Species
  - 2.2 Harvest Species
  - 2.3 Resident and Migratory Waterfowl
  - 2.4 Forest Service Management Indicator Species (Black-tailed mule deer, Band-tailed pigeons, Black bear)
  - 2.54 Species Biodiversity
- 3.0 Analysis of Project-related Effects on Wildlife Habitat
  - 3.1 Riparian and Lacustrine Habitats
  - 3.2 Wetland Habitats
  - 3.3 Upland Habitats
- 4.0 Reference Identification of potential PM&E measures
- 5.0 References

to include:  
(include what the purpose of the report will be).

The report will identify potential project effects to wildlife species including band-tailed pigeon, black bear, waterfowl, black-tailed deer, special status species, CDFG harvest species, and species biodiversity. The report will also identify potential effects on wildlife habitat including black-tailed deer winter range, riparian, wetland, and lacustrine (lakes). This report will provide the basis for development of PM&E protection, mitigation and enhancement measures and settlement agreements related to wildlife and wildlife habitat. The results of these negotiations and agreements will be incorporated into a wildlife management plan for submittal to FERC as part as the license application. ~~The report will identify potential project effects to wildlife species including band-tailed pigeon, black bear, waterfowl, black-tailed deer, special emphasis species, CDFG harvest~~

species, and species biodiversity. The report will also identify potential effects on wildlife habitat including deer winter range, riparian, wetland, and lacustrine (lakes).

## **Products/Deliverables**

Summary report completed by January 2004

## **7.0 Coordination and Implementation Strategy**

### ***Coordination with Other Resource Areas/Studies***

This study requires information related to current and future project operations, maintenance, recreation use and development, and land use. Coordination with these other work groups will be required for timely completion of this study. The results of this study also require completion of other terrestrial resource studies including those related to issues ~~SP T2, SP T3, SP T4, SP T5, SP T6, SP T7, SP T8, SP T9, SP T10, and SP T11.~~

Study #T2SP-T2, Study

### **Schedule**

#SP-T3, SP-Study #T4, SP-Study #T5, SP-Study #T6, SP-Study #T7, SP-Study #T8, SP-Study #T9, SP-Study #T10, and SP-Study #T11.

### **Issues**

This study addresses the potential effects of project features, existing and future operations (including power generation, water storage and release, ramping rates, pump-back, water levels and water level fluctuations)- maintenance practices, and maintenance of wildlife and wildlife habitat. Specific issues identified during scoping include:

### **Direct**

- 2 Maintain winter habitat for band-tailed pigeons
- 3 Maintain or enhance deer winter range
- 17 Maintain habitat to support viable populations of all native and desired nonnative vertebrate species
- 18 Improve and protect habitat for designated emphasis and harvest species
- 20 Provide a diversity of vegetation types and habitat to support viable populations of all fish, wildlife and plant species
- 41 North forebay – preservation of existing wildlife
- 44 Preserve wildlife habitat in the diversion pool area
- 50 Effects of fluctuating water levels in afterbay on wildlife
- 59 Operate water levels in Thermalito Afterbay to prevent adverse impacts to Pacific Flyway waterfowl, especially during nesting in spring and early summer; continue to coordinate with DFG

- 60 Evaluate effects of proposed increases in recreational activity in Thermalito Afterbay on waterfowl and other wildlife
- 63 Protection and sustained conservation of terrestrial wildlife and flora in the project-affected area; comprehensive and well-crafted planning

## Indirect

- 19 Provide diversity of plant and animal communities and tree species by assuring the continuous and viable presence of all seral stages of all native plant communities on the forest
- 39 Manage flows and/or reservoir storage to maintain or enhance riparian plant communities and habitat for all life stages of fish. Cooperate with local, State, and other Federal water management agencies. Protect riparian areas while providing developed facilities
- 46 Improve terrestrial habitat with introduction of salmon (bears)
- 47 Continue inventories of plant and animal species in the project area.
- 48 Protect riparian habitat in project area
- 51 Restoration of areas used as stockpile sites during dam construction

This study addresses Issue Statement T1—Effects of project features, existing and future operations (including power generation, water storage and release, ramping rates, pump back, water levels and water level fluctuations) and maintenance of wildlife and wildlife habitat. Specific concerns include deer winter range, band tailed pigeon wintering habitat, designated emphasis and harvest species, wintering and nesting waterfowl, and wildlife use of project and project-affected waters. Specific issues identified during scoping include:

- 2 Maintain winter habitat for band tailed pigeons
- 3 Maintain or enhance deer winter range
- 17 Maintain habitat to support viable populations of all native and desired nonnative vertebrate species
- 18 Improve and protect habitat for designated emphasis and harvest species
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~~63 Protection and sustained conservation of terrestrial wildlife and flora in the project affected area; comprehensive and well-crafted planning~~

## **8.0 Study Schedule**

The schedule is highly dependant upon the schedule of the recreation, land use, and operations work groups in providing information for analyses of future operations, recreation use and facilities, and land use. Preliminary schedule is to complete Task 2 by August 2002, Tasks 1, 3 and 4 by ~~August 2004~~September 2003, Tasks 5 and 6 by ~~January 2004~~December 2003. ~~An interim reports will be provided during July 2003. Task 7 will be completed by October~~January 2004.

## **Issues**

### **Issue Statement T1**

~~Effects of project features, existing and future operations (including power generation, water storage and release, ramping rates, pump-back, water levels and water level fluctuations) and maintenance of wildlife and wildlife habitat. Specific concerns include deer winter range, band tailed pigeon wintering habitat, designated emphasis and harvest species, wintering and nesting waterfowl, and wildlife use of project and project affected waters.~~

### **Issues Identified During Scoping**

~~2Maintain winter habitat for band-tailed pigeons~~

~~3Maintain or enhance deer winter range~~

~~17Maintain habitat to support viable populations of all native and desired nonnative vertebrate species~~

~~18Improve and protect habitat for designated emphasis and harvest species~~

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